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**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**  
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference AJC/P053069WO	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GB 03/04097	International filing date (day/month/year) 26.09.2003	Priority date (day/month/year) 27.09.2002
International Patent Classification (IPC) or both national classification and IPC G21C19/46		
Applicant BRITISH NUCLEAR FUELS PLC et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
- These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:
- I ☒ Basis of the opinion
  - II ☐ Priority
  - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - IV ☐ Lack of unity of invention
  - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
  - VI ☐ Certain documents cited
  - VII ☐ Certain defects in the international application
  - VIII ☐ Certain observations on the international application

Date of submission of the demand  07.04.2004	Date of completion of this report  22.10.2004
Name and mailing address of the International preliminary examining authority:   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer  Lohberger, S  Telephone No. +49 89 2399-6723  

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/GB 03/04097**

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17):*

**Description, Pages**

1-6 as originally filed

**Claims, Numbers**

1-22 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).  
☐ the language of publication of the international application (under Rule 48.3(b)).  
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority in written form.  
☐ furnished subsequently to this Authority in computer readable form.  
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:  
☐ the claims, Nos.:  
☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

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**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes: Claims	1-22
	No: Claims	
Inventive step (IS)	Yes: Claims	1-22
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-22
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

**Re Item V**

**Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Reference is made to the following document/s/:

D1: US-A-5171546

D2: US-A-5745835

D3: US-A-4749519

D4: US-A-5437847

D5: US-A-5069827

D6: Physics Doklady, American Institute Of Physics. New York, Us (01-09-1993), 38(9), 394-395

D7: Journal Of Alloys And Compounds, Elsevier Sequoia, Lausanne, Ch (12-06-1998), 271-273, 693-696

2. D1, especially description column 1, line 5 to column 4, line 49 and claims describes the removal of palladium by solvent extraction in a process wherein actinides are dissolved in nitric acid. The use of divalent silver for this purpose is not mentioned. D1 is silent about any reason why palladium shall be removed besides the fact that it is present in non-negligible concentration. Any hint to a positive influence of a silver salt promoted dissolution of actinic oxides if palladium is not present cannot be found.

D2 (see the whole document) as well as D3 (see the whole document) disclose the dissolution of actinic oxides in nitric acid with the help of divalent silver salts in an electrolytic cell.

D4, especially description column 1, line 15 to column 3, line 60 discloses the removal of palladium by precipitation, complexation or electrolytically in solutions containing dissolves actinide oxides in nitric acid. Divalent silver is not used. The reason for the palladium removal is different from the reason in present Application: Palladium disturbs Rhutenium recovery in D4.

Applicant argumentation is therefore convincing. A combination of D1 or D4 with one of D2 or D3 is based on a classic ex-post-facto-analysis of present

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International application No. PCT/GB 03/04097

Application.

Claim 1 is in accordance with article 33 PCT with regard to novelty and inventive step.

3. Dependent claims 2 to 22 are preferred embodiments of claim 1 and as such they fulfil the requirements of article 33 PCT as well.